

QA in Volunteer Monitoring

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NJ Volunteer Monitoring Summit

New Jersey Volunteer Monitoring Summit

- If we climb together,
the summit won't seem so high.



Volunteer Monitoring

- Making it Count

Goals:

- Monitoring: Support Decision-making
- Data: Provide relevant information
- Data Quality:
 - Ensure usability of data
 - Allow data to support decision-making
 - Credible, Documented, Defensible

To Support Your Goals

- Don't waste time collecting useless data.
- Don't corrupt decision-making with useless data.
 - Data of unknown quality are useless.
 - Useless data are worse than no data.

QA is NOT a paper exercise.

- QA paper IS the proof that's in the pudding.
- Quality:
 - You only know the quality of the data when you can prove it.
 - The issue is not “good” data,
 - The issue is “useful” data.

Proving that the data are useful

Before	During	After
Plan	Implement	Assess

Planning for Quality:

- Quality Assurance Project Plan (QAPP)
 - with Measurement Quality Objectives (MQOs)
 - QAPP is Blueprint for success
- Standard Operating Procedures (SOPs)
- Training

Implementing for Quality:

- Follow the QAPP and SOPs.
- Document any changes.

Assessing for Quality:

- Find someone to oversee it.
 - Conduct Audits.
- Reconcile what happened with MQOs.
 - Consider “metadata”
 - Consider changes to QAPP/SOPs
 - Conclusion: Will the data be useful?

Documentation:

- Umbrella that protects the project from the elements

QAPP

- QAPP ties together needs with plans
- Work Plan: a plan to do work
- QAPP: a plan to achieve success
in your work
- Quality makes your work acceptable
- Acceptability lets others USE your work.

QAPP Development

- A Team Effort
- An Iterative Process
- Goal Oriented

QAPP Development

- Follow “boss’s” Guidance
- For EPA, either
 - “R-5” and “G-5”
 - “Midget”
 - “Appendix D”
- Don’t let guidance limit your
 - Thought process
 - Documentation of it

QAPP: What will be “Acceptable”?

- Documented logical thought process
- Questions to be answered
- Step by step process to answer them
- Checks to make sure it works

QAPP:

What will NOT be Acceptable?

- Somebody else's plan
- Package of SOPs
- Package of photocopied methods
- Work Plan

Remember:

Different formats are OK

- For Illustration We'll use Appendix D from "Volunteer Monitor's Guide to Quality Assurance Project Plans"
 - <http://www.epa.gov/volunteer/qappcovr.htm>

QAPP Development “Guidance”

- We'll only discuss some sections, starting with...
- Element 4, Project/Task Organization
 - Needs Reps from ALL organizations

QAPP Development “Guidance”

- 5. Problem Definition/Background &
- 6. Project/Task Description
- These two sections go together & tell
 - Why project is needed
 - What project hopes to accomplish
 - How project will accomplish it
- They will make or break
your QAPP & project
- **Use as much space as you need**

7.Measurement Quality Objectives (MQOs - not DQOs, they're harder)

- 7.B. Data **Representativeness**
 - Most important MQO
 - How well will data represent what you want to learn, and how ensure it.
 - If you don't collect the "right" sample the **results will mean nothing.**
- Most uncertainty & variability are due to poor or unknown representativeness.

14. Quality Control Requirements

- QC = Routine Internal Checks
 - Keep yourself on track
 - Including: duplicates, blanks, etc.

20. Assessment & Response Actions

- Outside Checks, and Inside Fixes
- Find a knowledgeable “Outsider” to
 - Observe (Audit) with Independence
- Include process and authority to make and document corrections based on audit results.
- Adds credibility

24. Reconciliation with DQOs

- Should be “MQOs” not “DQOs”
- Asks: Are the data suitable for use?
 - Means: Dare we base decision on the data?

The End

